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| Collection of Radio-Chemical and Dosimetric Methods  | SOV/3589 |
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Collection of Radio-Chemical and Dosimetric Methods

SOV/3589

of measuring external streams of x- and gamma-radiation, and methods of individual dosimetric monitoring; (5) Absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Yu.V. Sivintsev and D.P. Shirshov. References appear at the end of each chapter.

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Preface

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3

MAREY, A.N.  
P.2-3

PHASE I BOOK EXPLOITATION

SOV/3589

Sbornik radiokhimicheskikh i dozimetricheskikh metodik (Collection of Radio-Chemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): N.G. Gusev, U.Ya. Margulis, A.N. Marey, N.Yu. Tarasenko, Yu.M. Shtukkenberg; Ed. (Inside book): V.I. Labaznov; Tech. Ed.: A.I. Zakharova.

**PURPOSE:** This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

**COVERAGE:** This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods

Card 1/2  
2

MAREY, A. N.

"The Problem of Radioactive Waste Material."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.

SHANDALA, M.G.; MAREY, A.N.

Discussion on G.D. Lebedeva's article "Plankton as an index of  
fresh water supply pollution by radioactive substances." Med.  
rad. 3 no.4:91-92 J1-Ag '58. (MIRA 12:3)

1. Kafedra obshchey gigiyeny Dnepropetrovskogo meditsinskogo instituta  
(Shandala).

(WATER POLLUTION,

by radioisotopes, plankton as index (Rus))

(ISOTOPES,

water pollution, plankton as index (Rus)

MAREY, A.N.; SAUROV, M.M.; LEBEDEVA, G.D.

Passage of radiostrontium through the food chain from open water  
into human body [with summary in English]. Med.rad. 3 no.1:69-76  
Ja-F '58. (MIRA 11:4)

(STRONTIUM, radioactive,  
water & food contamination (Rus)  
(WATER POLLUTION,  
by radiostrontium (Rus)  
(FOOD,  
contamination by radiostrontium (Rus)

86V/26-58-12-8/44

AUTHOR: Marey, A.N., Candidate of Medical Sciences (Moscow)

TITLE: Radioactive Waste Products (Radioaktivnyye otkhody)

PERIODICAL: Priroda, 1958, Nr 12, pp 47-50 (USSR)

ABSTRACT: The author outlines the general danger involved in the disposal of radioactive waste products into the ground or bodies of water. The role of microorganisms and assimilation of radioactive substances by plants is considered. Ion exchange filters are thought to be the best protective means against ill radioactive effects. The idea of burying radioactive waste in the depths of the oceans, as suggested by American and British institutions, is rejected. There are 3 Soviet references.

Card 1/1

MARZEYEV, A.N., prof.. Primali uchastiye: AGLITSKIY, S.S., prof.;  
VETOSHKIN, S.I., prof.; ZHABOTINSKIY, V.M., prof.;  
SMELYANSKIY, Z.B., prof.; MAREY, A.N., kand.med.nauk;  
SILIVANIK, K.Ye.. GORBOV, V.A., red.; SENCHILO, K.K.,  
tekhn.red.; ZAKHAROVA, A.I., tekhn.red.

[Communal hygiene] Kommunal'naya gigiena. Pri uchastii  
S.S.Aglitskogo i dr. Izd.2., dop. i ispr. Moskva, Gos.  
izd-vo med.lit-ry, 1958. 554 p. (MIRA 13:1)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for  
Marzeyev).

(PUBLIC HEALTH)



MAREY, Aleksandr Nikolayevich; TRAKHTMAN, N.N., red.; SENCHILO, K.K., tekhn.  
red.

[Sanitary protection of open waters from contamination by radioactive substances] Sanitarnaya okhrana otkrytykh vodoemov ot zagryazneniya radioaktivnymi veshchestvami. Moskva, Gos. izd-vo med. lit-ry, 1958. 89 p. (MIRA 11:7)  
(RADIOACTIVITY--SAFETY MEASURES) (WATER--POLLUTION)

MAREY, A.N.

Hygienic evaluation of radioactive strontium as a factor in the  
pollution of the environment [with summary in English]. Med.rad. 2  
no.5:89-95 S-O '57. (MIRA 11:2)

(ATOMIC WARFARE,

fallout, radiostrontium in pollution of external  
environment, review (Rus))

(STRONTIUM, radioactive,

pollution of external environment in nuclear explosions,  
review (Rus))

MAREY, A.N.

USSR/General Biology - General Hydrobiology.

1-0

Abs Jour : Ref Zhur - Biol., No 5, 1958, 1-23

Author : Marey, A.N.

Inst : -

Title : Some Problems of Sanitary Protection of Reservoirs from Pollution by Radioactive Substances.

Orig Pub : Gigiena i sanitariya, 1956, No 7, 7-11

Abstract : A brief discussion of the problem of sanitary safety in atomic electrostations and measures to decontaminate their radioactive wastes, which pollute reservoirs. In order to prevent a secondary pollution as a result of desorption and transfer of activity to food through food.

Card 1/1

MAREY A.N. , RYZHOV, A.I.

"Methods for Making a Special Sanitary Inspection of Open Bodies of Water Contaminated by Radioactive Substances". p. 40.

Trudy Vsesoyuznoy konferentsii po Meditsinskoy Radiologii (Voprosy Gigieny i Dozimetrii) Medgiz, 1957, Moscow Russian, 24.

Proceedings of the All-Union Conference on Medical Radiology (Hygienic and Dosimetric Problems).

MAREY, A.N.

Radioactive wastes and public health problems. Med.rad. 1 no.4:3-7  
Jl-Ag '56. (MLRA 9:12)

(RADIATION PROTECTION

radioactive wastes as problem in pub. health)

(PUBLIC HEALTH

protection from radioactive wastes)

MA REY, A. N.

AID P - 2624

Subject : USSR/Medicine  
Card 1/1 Pub. 37 - 1/22  
Author : Marey, A. N., Kand. Med. Sci.  
Title : ~~Water organisms as sanitary indices of the pollution~~  
of reservoirs by radioactive substances  
Periodical : Gig. 1 san., 8, 3-9, Ag 1955  
Abstract : In connection with the wide use of radioactive isotopes  
in all fields of the national economy and the ensuing  
contamination of reservoirs, a method is presented for  
the control of the purity of water. Along with radio-  
metric investigations, the author recommends tests to  
be performed on weeds, overgrowth, plankton, fishes  
etc. for determining the concentration of radioactive  
substances in reservoirs. The tests are described  
with tables. 8 refs., 1922 - 1954.  
Institution : Institute of Industrial Hygiene and Occupational  
Diseases  
*Acad. Med. Sci. USSR, Moscow*  
Submitted : Ap 25, 1955

MAREY, A. N.

PA 59/49T90

USSR/Medicine - Water Purification Dec 48  
Medicine - Public Health

"Water Supply Lines, Their Installation and  
Operation Under Sanitary Control," A. N. Marey, 4 pp

"Fel'dsher 1 Akusher" No 12

In 1937 the SNK SSSR passes a law, "On the Sanitation and Protection of Water Reservoirs," to safeguard water sources. Systems consist of a central water supply, filtering and purifying plants. Under sanitary control, the quality of the water is analyzed for residual chlorine, turbidity, color and taste, intestinal bacilli and total bacterial count.

59/49T90

MAREY, A. N.

PA 28/49T75

USSR/Medicine - Water, Supply  
Medicine - Hygiene and Sanitation

Oct 48

"Sanitation Evaluation of the Quality of Drinking  
Water," A. N. Marey, 6 3/4 pp

"Fel'dsher i Akusherka" No 10

Discloses two basic characteristics for solving  
problem of quality of drinking water: determination  
of sanitation conditions of chemical and bacteric-  
logical compositions of water through laboratory  
tests, and on-the-spot examination of water  
sources.

END

28/49T75

MAREY, A.I.; SIDOROVICH, Ye.A.

Effect of cis-trans isomerism and degree of cross-linking on the dynamic properties of the synthetic (SKD) cis-1,4-butadiene rubber. Kauch. i rez. 24 no.7:1-4 J1 '65. (MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva.



L 62997-65

ACCESSION NR: AP5016514

3

volume change during the crystallization process: maximum rate, half-life, and depth of crystallization. It has been established that by decreasing the length of the polyester segment of the chain, by increasing the degree of cross-linking, and by disturbing the orientation in the polymer by using one-step synthesis, it is possible to lower considerably the resins' crystallizability. Orig. art. has: 3 graphs and 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (All-Union Scientific Research Institute of Synthetic Rubber) 55

SUBMITTED: 10Aug64

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 003

OTHER: 000

*Card*  
Card 2/2

L 62997-65 EWT(1)/EWT(m)/EWT(j)/T/EEG(b)-2 IJP(c) GG/RM

ACCESSION NR: AP5016514

UR/0190/65/007/006/1117/1121  
678.01:53+678.66

AUTHORS: Apukhtina, N. P.; Marey, A. I.; Novikova, G. Ye.; Myuller, B. Ye.

TITLE: Crystallization of urethane elastomers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 6, 1965, 1117-1121, and bottom half of insert facing p. 1043

TOPIC TAGS: crystallization, organic chemistry, elastomer, synthesis, rubber, urethane, polymer, resin

ABSTRACT: To minimize the crystallizability of the urethane resins, the effect of molecular weight of polyesters, the concentration of cross-linkages and the methods of synthesis have been studied. Urethane elastomers selected for this study were obtained from reaction of highly oriented polyesters with 2,4-stil-benediisocyanate. The dilatometric method of A. I. Marey, N. P. Kuznetsov, and G. Ye. Novikova (4-ya Nauchno-tekhnicheskaya konferentsiya po voprosam khimii i tekhnologii kauchuka i reziny (tezisy dokladov), Yaroslavl', 1962, 13) has been employed for this study. The crystallizability of the polymers was defined by means of 3 parameters determined graphically from the curve of the relative

Card 1/2

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|--|---|
| L 14166-66 EWP(j)/EWT(m)/(T) RM/WW   |   |
| ACC NR: AP6003943  | SOURCE CODE: UR/0374/65/000/005/0085/0089       |
| AUTHOR: <u>Marey, A. I. (Leningrad); Sidorovich, Ye. A. (Leningrad)</u> <span style="float: right;">44<br/>B</span>  |   |
| ORG: none  |   |
| TITLE: Dynamic and <u>mechanical properties</u> of heterogeneous polymer systems   |   |
| SOURCE: Mekhanika polimerov, no. 5, 1965, 85-89  |   |
| TOPIC TAGS: copolymer, <del>block copolymer</del> <sup>structure</sup> , rubber, butadiene, isoprene, <del>dynamic properties, mechanical fatigue</del> <sup>solid mechanical property</sup>   |   |
| ABSTRACT: The dynamic and mechanical properties of copolymers, block polymers, and rubber blends based on butadiene and <u>isoprene</u> have been investigated over a wide temperature range. The fundamental principles of dynamic behavior of heterogeneous polymer systems have been elucidated permitting the use of the above procedure for the determination of polymer compatibility, their content in blends, and of the composition of copolymer. Butadiene-isoprene copolymers were prepared by <u>L. S. Bresler, and block copolymers</u> <sup>1941</sup> by G. N. Petrov. Orig. art. has: 4 figures. [Based on author's abstract]. |   |
| SUB CODE: 11/  | SUBM DATE: 11Mar65/ ORIG REF: 008/ OTH REF: 002 |
| Card 1/1 <i>HC</i>   | UDC: 678:620.168.3                              |

L 45246-65

ACCESSION NR: AP5010846

ships obtain when the SKD rubber has partially crystallized. A similarity was established between the dynamic mechanical behavior of rubbers of various molecular weights in the temperature range of the highly elastic state. In the range of above-zero temperatures, the behavior of crystallizing and amorphous polymers is the same; at sub-zero temperatures, the dynamic properties of crystallizing rubbers decline appreciably owing to the development of crystallization phenomena whose role increases with the molecular weight. "The fractions were prepared by Ye. G. Erenburg using the method of fractional precipitation." Orig. art. has: 5 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 007

OTHER: 005

Card

2/2

L 45246-65 EWT(m)/EPF(c)/EWP(j) Pc=4/Pr=4 R<sup>M</sup>  
 ACCESSION NR: AP5010846 UR/0138/65/000/004/0001/0004

21  
19  
B

AUTHOR: Marey, A. I.; Sidorovich, Ye. A.

TITLE: Effect of molecular weight on the dynamic mechanical properties of cis-1,4-butadiene rubber SKD

SOURCE: Kauchuk i rezina, no. 4, 1965, 1-4

TOPIC TAGS: synthetic rubber, butadiene rubber, polyvinylacetate, rubber crystallization, rubber mechanical property, rubber molecular weight, rubber elasticity / SKD rubber

ABSTRACT: Laboratory samples of SKD rubber with molecular weights between 24,000 and 800,000 were studied at temperatures of -100 to 100C. The dynamic properties were measured with a KS pendulum elastometer. In the range of molecular weights of 100,000 to 800,000, a relationship was found between the rebound elasticity and the molecular weight which is expressed by the equation  $90-E = K \times 1/M$ , where E is the elasticity and  $K=98 \times 10^5$ . This permits a rapid evaluation of the molecular weight of rubber polymers. A simple relationship was also found between the rebound elasticity and temperature for natural rubber and polyvinyl acetate of various molecular weights; it applies to plastics as well. More complex relation-

Card 1/2

L 59224-65

ACCESSION NR: AP5016879

ASSOCIATION: None

SUBMITTED: 26Dec64

ENCL: 00

SUB CODE: MT

NO REF SOV: 005

OTHER: 002

*dm*  
Card

2/2

L 59224-65 EWT(n)/EPP(c)/ENP(j)/T Pc-h/Pr-h RM

ACCESSION NR: AP5016879

UR/0374/65/000/003/0015/0020  
678:539.32

AUTHOR: Marey, A. I. (Leningrad); Sidorovich, Ye. A. (Leningrad); Novikova, G. Ya. (Leningrad)

TITLE: Influence of the crystalline phase in rubberlike polymers on their elasticity

SOURCE: Mekhanika polimerov, no. 3, 1965, 15-20

TOPIC TAGS: divinyl rubber, isoprene rubber, natural rubber, rubber elasticity

ABSTRACT: The article deals with the influence of crystallization of divinyl<sup>15</sup> (SKD) and isoprene rubbers (NK, SKI-3, SKI) of regular structure on their elasticity in the transition temperature region. The elastic properties of the polymers were determined with a KS pendulum elastometer over a wide temperature range, and the data obtained were used to calculate the rebound elasticity and the dynamic elastic modulus. Crystallization was studied dilatometrically. Plots of the temperature dependence of the rebound elasticity are given for the range -120C to 0C. It was found that the formation of a crystalline phase in the rubber causes a uniform increase of the rebound elasticity in the transition region. A quantitative relationship was established between the minimum elasticity  $E_{min}$  and the content of the crystalline phase, showing that  $E_{min}$  can be used to evaluate the crystallinity of such polymers. Orig. art. has: 7 figures and 1 table.

Card 1/2

GORELIK, B.M.; MAREY, A.I.; BUKHINA, M.F.; NOVIKOVA, G.Ye.; POMIRCHAYA, B.A.

Effect of filling with carbon black on the crystallation of rubber. Kauch.i rez. 23 no.11:13-18 N '64.

(MIRA 18:4)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti -  
Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka im. S.V.Lebedeva.



L 40560-65

ACCESSION NR: AT5004107

2

dium catalyzed polybutadiene) showed the best wear resistance, the resistance of butadiene-styrene copolymers increased with butadiene content, and the resistance of unfilled natural and synthetic rubbers decreased with temperature as the temperature approached the glass transition point of the polymer. At temperatures exceeding the glass transition point by 75C, the wear resistance of natural and various synthetic rubbers was approximately equal. Testing of various metals and polymers showed that an unfilled 10:90 styrene-butadiene rubber had almost twice the resistance of steel, with Teflon, polystyrene, and polymethyl methacrylate at the lower end of the resistance scale. The results are explained by the generation of comparatively low stresses on the surface of soft and elastic materials and by the relaxation mechanism after particle impact. The results were confirmed by commercial experience, e.g. with hoses of sand blowers or with transport belts. Orig. art. has: 5 tables and 1 figure.

ASSOCIATION: None

SUBMITTED: 05Aug64

ENCL: 02

SUB CODE: MT, IE

NO REF SOV: 003

OTHER: 001

Card 2/4

L 40560-65 EWT(d)/EWT(m)/EPF(c)/EWP(c / EWT(d))/EPR/EWP(j)/T/EWP(k)/EWP(l)  
Pc-4/Pf-4/Pr-4/Ps-4 RPL WW/GS/RM

ACCESSION NR: AT5004107

S/0000/64/000/000/0216/0222

AUTHOR: Marey, A. I.; Izvozchikov, B. V.

TITLE: Determination of rubber wear in a stream of abrasive particles

SOURCE: Nauchno-tekhnicheskoye soveshchaniye po friktsionnomu iznosu rezin. Moscow, 1961. Friktionnyy iznos rezin (frictional wear of rubber); sbornik statey. Moscow, Izd-vo Khimiya, 1964, 216-222

TOPIC TAGS: rubber wear, frictional wear, rubber abrasion, abrasion tester, synthetic rubber, butadiene styrene rubber polybutadiene rubber, natural rubber, glass transition point

ABSTRACT: An apparatus for measuring the wear of rubber in a stream of abrasive particles under simulated service conditions is described and a theory is developed to explain the experimental results. A cylindrical channel of the specimen is exposed to particles of abrasive EB-100 moving at 80 m/sec. as shown in Fig. 1 of the Enclosure, and wear is defined as the volumetric loss per unit of time ( $\text{cm}^3/\text{sec}$ ) referred to  $1 \text{ cm}^2$  of the exposed channel surface. Low-modulus, high elasticity rubber types such as unfilled SKS-30A (70:30 butadiene-styrene copolymer) or SKB (90-

Card 1/1 2

L 17563-65

ACCESSION NR: AP4049782

where  $\lg \tau_{1/2}$  is the log of the half-period of crystallization,  $\lg \tau^0_{1/2}$  is the segment cut off by the straight line on the axis and corresponds to the half time of crystallization of the sample in the absence of crystallization; and B is a magnitude showing the effect of stress on crystallization and determined as the tangent of the angle of the slope of the characteristic straight line to the axis  $\sigma$ . For unstressed rubbers, the ability to crystallize increases with an increase in the carbon-black content. The same was observed for rubbers crystallizing under conditions of deformation (compression). The influence of filling depends on the type of transverse links. For natural rubber and SKI-3 with a predominant content of polysulfide links, there is a noticeable change in the parameters  $\lg \tau^0_{1/2}$  and B. For rubbers with a predominant content of monosulfide links, filling changes these parameters very little. In the case of SKD, filling affects crystallization analogously. Orig. art. has: 5 figures, 1 table and 1 formula.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute for the Rubber Industry); Vsesoyuzny'y nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute for Synthetic Rubber)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 004

OTHER: 004

Card 2/2

L 17563-65 EWT(m)/EWP(j) Pc-4 RM  
ACCESSION NR: AP4049782

S/0138/64/000/011/0013/0018

AUTHOR: Gorelik, B. M.; Marey, A. I.; Bukhina, M. F.; Novikova, G. Ye.;  
Pomirchaya, B. A.

TITLE: Effect of carbon-black filler on rubber crystallization

SOURCE: Kauchuk i rezina, no. 11, 1964, 13-18

TOPIC TAGS: rubber crystallization, natural rubber, synthetic rubber, carbon black  
filler, polysulfide crosslink, monosulfide crosslink, rubber elasticity

ABSTRACT: The literature on the effect of fillers is sparse and contradictory and applies only to natural rubber. This work is an attempt to expand the knowledge to both natural and synthetic rubbers. Two methods of investigation were used - a study of the crystallization of rubbers in the free state by the dilatometric method, and a study of deformed rubbers from the point of view of recoverability. A comparison was made of the kinetic curves obtained by the dilatometric methods those obtained from the change in recoverability. The kinetics of crystallization of natural rubber were studied at -25C, those of synthetic rubber SKI-3 at -25C and of rubber SKD at -38, -45, and -56C. Data on crystallization of deformed rubber were processed with the aid of the formula  $\lg \tau_{1/2} = \lg \tau_{1/2}^0 - B \sigma$ .

Card 1/2

L 13815-65  
ACCESSION NR: AP4047668

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute for  
Synthetic Rubber)

SUBMITTED: 00

ENCL: 00

SUB CODE: 00

NO REF SOV: 002

OTHER: 010

Card 3/3

L 13815-65

ACCESSION NR: AP4047668

with decreasing temperature from -30 to -56-57C, but decreases with a further decrease in temperature. This maximum does not depend on the method of preparation nor on structural molecular factors. The kinetic parameters are calculated by Avrami's equations. They describe the process of crystallization with sufficient accuracy except in the initial and final stages, and can be used for the evaluation of the kinetics of crystallization of different polymers. The tabulated data on the relationship between intrinsic viscosity and crystallization show that with decreasing molecular weight, the crystallization decreases, the half-life increases and the degree of crystallization decreases. A decreasing degree of purity of the microstructure also decreases the crystallizability of the rubbers. A polymer containing less than 75% cis-1,4 structure does not crystallize. With increasing degree of polymerization, the crystallizability decreases. Infrared spectra show that the degree of polymerization does not affect the microstructure of rubbers, while the molecular weight of SKD samples usually decreases with increasing degree of polymerization. Thus, the decrease in molecular weight is apparently the main cause of the decrease in crystallizability resulting from the increase in the degree of polymerization. Orig. art. has: 3 figures, 3 tables and 2 formulas.

Card 2/3

L 13815-65 EWT(m)/EMP(j) Pc-4 RM

ACCESSION NR: AP4047668

8/0138/64/000/010/0007/0012

AUTHOR: Marey, A. I., Novikova, G. Ye., Kuznetsov, N. P.

TITLE: Crystallization of stereoregular butadiene rubbers

SOURCE: Kauchuk i rezina,, no. 10, 1964, 7-12

TOPIC TAGS: butadiene rubber, stereoregular synthetic rubber, dilatometry, rubber crystallization, rubber microstructure

ABSTRACT: The crystallization of stereoregular butadiene rubber was investigated at different temperatures and the effect of some structural factors such as molecular weight, degree of steric purity of the rubber microstructure and the degree of polymerization on the crystallization process was studied. The microstructural investigations were effected by infrared spectroscopy and the molecular wt. was characterized by the intrinsic viscosity. More than 300 batches of experimental and technical cis-1,4-butadiene rubber were investigated. The dilatometric method is proposed for determining the optimum temperature of crystallization of rapidly crystallizing rubbers in their mixtures with noncrystalline polymers. The crystallizability of the samples was studied over a temperature range of -30 to -77C. It was found that for all batches of SKD rubber the rate of crystallization increased

Card 1/3



L 12777-63

ACCESSION NR: AP3001528

On the other hand, at a vulcanization temperature of 280C both the vinyl and the inside double bonds are ruptured, with a simultaneous increase in CH sub 2 groups. A study of the thermovulcanization of cis-1,4-divinyl rubber showed that with an increase in temperature and heat duration the number of cis-1,4-links decreases considerably due to their rupture and transformation into the trans-form. Besides, there also takes place a break in the few double bonds in the position 1,2. The paper was presented at the conference on spectroscopy in Gor'kiy, June 5-12, 1961. N. G. Martem'yanova participated in the work. Orig. art. has: 2 charts.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka  
(Scientific Research Institute of Synthetic Rubber)

SUBMITTED: 00

DATE ACQ: 17Jun63

ENCL: 04

SUB CODE: 00

NO REF SOV: 002

OTHER: 003

Card 2/52



L 12777-63 EPR/EWP(j)/EPF(c)/EWT(1)/EWT(m)/BDS AFFTC/ASD/ESD-3/  
APGC Ps-4/Fc-4/Pr-4 RM/WR  
ACCESSION NR: AP3001528 S/0032/63/029/006/0710/0712

AUTHOR: AL'tshuler, M. Z.; Marey, A. I.; Nel'son, K. V.; Skripova, L. S.

TITLE: Study of thermal structuration in insoluble polymers by quantitative infrared analysis

SOURCE: Zavodskaya laboratoriya, v. 29, no. 6, 1963, 710-712

TOPIC TAGS: thermal structuration, insoluble polymer, infrared analysis, thermovulcanization, divinyl rubber, potassium bromide

ABSTRACT: An earlier development, the so-called "powder-state method," was used for qualitative determination of the microstructure of insoluble samples of polybutadienes. Soluble samples of rubbers, the structure of which was determined by infrared spectroscopy of their solutions, served as standards. Divinyl rubber samples of 0.005 gm were subjected to pressure trituration with 2 gm of potassium bromide, which served as an abrasive. This was facilitated by the addition of some carbon tetrachloride, lowering the elasticity of the insoluble polymers. The infrared spectra of the thus treated SKB rubber before and after 4 hours heating at 250 and 280C showed that at 250C there takes place a break of double bonds in the 1,2 position, while those in trans-position remain unaffected.

Card 1/82

83661

S/138/60/000/002/001/009  
A051/A029

The Effect of Functional Groups on the Vittrification Temperature of Rubber-Like Polymers

Thus, a conclusion is drawn that Formula 5 would be applicable to polymers, where the molecular links are arranged "head to tail", which corresponds to the lowest vittrification temperature of the polymer for a given composition. A satisfactory correlation was achieved between the experimental and theoretical computations of  $T_c$  in saturated and unsaturated polymers, which proves that the double bonds in the main chain of the macromolecule's primary valencies has apparently no effect on the  $T_c$  of the polymer. This conclusion has been confirmed by results obtained by other authors (Ref. 8), who found that  $T_c$  of natural rubber and gutta-percha does not change after deep hydration (the residual unsaturation being less than 8%). There are 2 tables and 8 references: 2 Soviet, 3 English, 2 German and 1 Italian.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S.V. Lebedev)

Card 3/3

83661

S/138/60/000/002/001/009  
A051/A029

# The Effect of Functional Groups on the Vitrification Temperature of Rubber-Like Polymers

the given polymer; K is the concentration of the functional groups, related to the four carbon atoms of the polymer chain. Each term in the Formula (4) is analyzed as to its probable significance. At the present time there is no information available on the magnitude of the interaction between the different atomic groups in polymers. Only certain data for organic liquids have been published (Refs. 2 and 3). These correspond only approximately to the energy values of the atomic group interactions in polymers (Table). Applying these figures to Formulae (1) and (2), the general Formula (4) can be expressed in the following form:  $T_c = 0.02 EK - 105$  (5), where: E and K are the cohesion energy of the functional groups and the concentration in the polymer chain, respectively. The validity of Formula 5 was confirmed by the satisfactory correlation between the computed and experimental values obtained on a series of polymers. A table, showing both experimental and computed values of  $T_c$ , is given, from which it is seen that a slight discrepancy exists between the computed values and the experimental ones of the ethylene and the propylene copolymer, probably due to the presence of symmetrically and adjacently located functional groups.

Card 2/3

83661

S/138/60/000/002/001/009  
A051/A029

15.9201 2209 1153 1436

AUTHOR: Marey, A.I.

TITLE: The Effect of Functional Groups on the Vitrification Temperature of Rubber-Like Polymers

PERIODICAL: Kauchuk i Rezina, 1960, <sup>19</sup>No. 2, pp. 1 - 3

TEXT: The author refers to a previous article (Ref. 1), where he proved that a linear relationship exists between  $T_c$ , the vitrification temperature of butadiene polymers, and  $K_1$ , the concentration of the vinyl groups in the polymer chains, as expressed in Formula 1. The present article deals with the results of the investigations, pointing out the linear relationship which also exists between the butadiene copolymers with styrene, and butadiene with nitrile of acrylic acid, as to vitrification temperature versus concentration. Formulae 2 and 3 show the respective relationships for the two copolymers, and Formula 4:  $T_c = AK - 105$ , combines the two expressions into one mathematical equation where:  $T_c$  is the vitrification temperature of the polymer in  $^{\circ}C$ ; A is the numerical coefficient, the value of which is determined by the nature of the functional group of

Card 1/3

SOV/20-124-3-29/67

The Production of Crystalline 1-4-Transpolybutadiene and -Polyisoprene  
and the Investigation of Their Properties

prior to the photographing of its infrared spectrum. The spectrum confirms the 1-4 trans-configuration. A curve of the deformation on repeated intensive heating was plotted. A table gives the density changes brought about by heating. The infrared spectrum of polyisoprene was photographed by K. V. Nel'son, and that of polybutadiene by Ye. I. Pokrovskiy, and the x-ray photographs were made by L. A. Volkova. . There are 2 figures, 1 table, and 3 references, 1 of which is Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR  
(Institute of High Molecular Compounds of the Academy of Sciences, USSR)  
Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva  
(All-Union Research Institute for Synthetic Caoutchouc imeni S. V. Lebedev)

Card 2/3

5(3)

SOV/20-124-3-29/67

AUTHORS: Tinyakova, Ye. I., Dolgoplosk, B. A., Corresponding Member,  
Academy of Sciences, USSR, Marey, A. I., Al'tshuler, M. Z.

TITLE: The Production of Crystalline 1-4-Transpolybutadiene and  
-Polyisoprene and the Investigation of Their Properties  
(Polucheniye kristallicheskikh 1-4-trans-polibutadiyena i  
poliizoprena i izucheniye ikh svoystv)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 595-597  
(USSR)

ABSTRACT: A description is given of the production of the symmetric  
1-4-transpolymers of butadiene and isoprene by the aid of  
oxide catalysts, in particular of chromium oxides on alu-  
minium silicate. - Polyisoprene is stable, its infrared spec-  
trum shows that 99% of the polymer chain possesses the  
1-4 trans-configuration. The iodine number corresponds with  
the theory. Due to the uniform structure, the polymer crys-  
tallizes, which could be confirmed by the x-ray photograph.  
This x-ray photograph is analogous to that of natural  $\beta$ -gutta  
percha. - Polybutadiene is a crystalline-fibrous substance.

Card 1/3

As it is difficultly soluble it was pressed into a film

SOV/138-59-2-3/24

Influence of the Polymerization Temperature of Butadiene with  
Alkali Metals on the Structure and Frost Resistance of Polymers

the glass temperature of the butadiene polymers is only  
defined by the content of vinyl groups and does not  
depend on their branched structure.

There are 2 figures, 2 tables and 12 references, 8 of  
which are Soviet and 4 English.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut  
sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scien-  
tific Research Institute for Synthetic Rubber imeni S.V.Lebedev)

Card 4/4

SOV/138-59-2-3/24

Influence of the Polymerization Temperature of Butadiene with Alkali Metals on the Structure and Frost Resistance of Polymers

butadiene polymers containing a varying number of vinyl groups are given in Table 2. Formulae for calculating the concentration of butadiene chains in the polymer ( $S_v$ ) are given, and it was found that the maximum concentration  $S_m$  equals 2, when  $S_v$  equals 1, which corresponds to polymers in which all the monomer molecules are added in the 1,2 position. The linear dependence between the glass temperature of the polymer  $T_g$  and the concentration of the vinyl groups ( $S_m$ ) in the polymer chain is shown in a graph (Fig 2) and it is suggested that the content of vinyl groups can be defined according to the glass temperature. This was confirmed by B. A. Dolgoplosk et al. (Ref 12). Polymers obtained at a temperature of 80°C and above are not completely soluble which confirms a spatial or branched structure at sufficiently high plasticity. The separated pure insoluble part of the polymer had the same glass temperature as the soluble fraction. Therefore,

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SOV/138-59-2-3/24

Influence of the Polymerization Temperature of Butadiene with  
Alkali Metals on the Structure and Frost Resistance of Polymers

groups in the polymer was defined according to the quantity of formic acid and formaldehyde in the ozonolysis products. Data in Table 1 indicate that an increase in the polymerization temperature in the given limits causes a substantial linear decrease in the content of vinyl groups in the polymers. This is particularly marked when butadiene is polymerized in the presence of lithium, and is observed to a much lesser degree when potassium is used. The difference in the reaction rates of the addition of butadiene molecules in the 1.2 and 1.4 position at a given temperature is defined by the various values of activation energies of these processes, and formulae are given for calculating the reaction rates and the activation energies. Fig 1: the dependence of the logarithm of the ratio of concentration of the 1.4 and 1.2 bonds on the polymerization temperature. It was found that the glass temperature of the butadiene polymer is a linear function of the concentration of vinyl groups. Glass temperatures for a number of

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SOV/138-59-2-3/ '4  
AUTHORS: Marey, A. I., Rokityanskiy, I. V. and Samoletova, .V.  
TITLE: Influence of the Polymerization Temperature of Butadiene  
with Alkali Metals on the Structure and Frost Resistance  
of Polymers (Vliyaniye temperatury polimerizatsii  
butadiyena shchelochnymi metallami na stroyeniye i  
moroostoykost' polimerov)

PERIODICAL: Kauchuk i rezina, 1959, Nr 2, pp 9-12 (USSR)

ABSTRACT: Butadiene polymers have an irregular micro- and macro-  
structure. This is also characteristic for polybuta-  
diene and polymers obtained during polymerization in the  
presence of alkali metals and their organic compounds.  
The authors carried out experiments on the relation  
between conditions of alkali polymerization, the  
structure and the properties of the polymers, and  
investigated the dependence of the glass temperature of  
butadiene polymers on the content of vinyl groups whilst  
changing the polymerization temperature from 0 to 120°C  
in the presence of alkali metals (lithium, sodium and  
potassium). Data on the structural analysis of polymers  
by ozonization were published by A. I. Yakubchik et al.  
Card 1/4 (Ref 6). The content of butadiene chains with vinyl

A Method of "Express" Control for Rubber Mixes SOV/138-58-9-10/11

plattens. A stop watch 14 is started simultaneously with release of the load. The critical time is usually less than one minute. Loads and temperature are adjusted to give final gap, as indicated by virtual cessation of movement of the dial indicator, of 3 to 5 mm, within a time of 40 to 70 seconds. Load can be increased to 4 kg for harder specimens. Specimens of material which vulcanises rapidly are tested at lower temperature. The whole test procedure can be completed within 2 - 2½ minutes of preparation of the rubber mix. Reproducibility of test results is said to be within 5%. Six months experience at the Red Triangle rubber footwear factory confirms the reliability and usefulness of this method of mix control. There are 3 Figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kachstva im. S. V. Lebedeva (All-Union Scientific Research Institute for Synthetic Rubber im. S.V. Lebedev)

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A Method of "Express" Control for Rubber Mixes SOV/138-58-9-10/11

The relationship between the gap and the corresponding time of vulcanisation, however, remains constant. Provided that the terminal conditions give a point on, or near, the line, the content of vulcanising groups is constant. Limits for departure from the characteristic line can be set, so that mixes within the limits will have satisfactory properties. An apparatus termed a "condition meter" has been constructed to determine the factors of critical time and gap rapidly. It is illustrated in Fig.3. Samples are taken from the mixing rolls as thin sheets of the mix. These are formed in a hand press into specimens 16 mm diameter and 10 mm thick, and are dusted with talc. The specimens are put between the electrically heated copper plattens, 16 mm diameter (13 in the fig.). Temperature is controlled thermostatically to plus or minus 1°. Standard test temperature is 180°C, and standard load 1 kg. The load is applied to the specimens as quickly as possible to prevent pre-vulcanisation. The load is released by turning the knob 7. The movement of the load is measured by the dial indicator, 12, which actually measures the gap between

Card 3/4

A Method of "Express Control" for Rubber Mixes SOV/138-58-9-10/11

the platten as it is heated under pressure, but the pressure on the sample will remain constant. The heated sample flows and the plattens move towards each other, vulcanisation takes place simultaneously, and as the two vulcanised 'fronts' of the sample come together, flow is diminished sharply. This is the limit of the critical time of vulcanisation. Measurement of time for flow to cease, and of the thickness of the specimen at this time, under fixed conditions of load and temperature, enables the properties of a rubber mix to be determined. Rate of flow depends primarily on the effectiveness of the vulcanising groups and the thermal conductivity of the rubber. Fig.1 shows gap between plattens versus time of vulcanisation for a mix with and without vulcanising groups. The critical time in the first case is 37 seconds, and the gap at that time, 3.8 mm. Fig.2 shows that a linear relationship exists between critical time and gap at that time. The different points were produced by applying different loads to similar specimens from the same mix. Rubber mixes of a given composition, but with different degrees of plasticity, give different values for the gap at the end of the test.

Card 2/4

AUTHOR: Marey, A. I.

SOV/138-58-9-10/11

TITLE: ~~A Method of "Express Control"~~ For Rubber Mixes  
(Metod ekspress-kontrolya rezinovykh smesey)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 9, pp 34 - 36 (USSR)

ABSTRACT: For continuous production processes, rapid and reliable methods of controlling rubber mixes are required. Current methods of determining the plasticity of vulcanised samples require 1 to 2 hours to complete. The properties of rubber on vulcanisation can be determined not only from its modulus after a given curing time, but also from the time required to reach a certain stage of vulcanisation at which the mix ceases to flow. This is termed the critical time of vulcanisation. The critical time can be determined by heating a sample between two plattens under a constant load. The amount of flow under such conditions depends on two processes acting in opposition to each other: softening of the rubber under the action of elevated temperature, and hardening of the rubber through vulcanisation. If the diameter of an initial cylindrical sample is the same as the diameter of the plattens, the sample will spread beyond

Card 1/4

MAREY, A.I.

✓ Rubber composition for galoshes. A. I. Marey.  
U.S.S.R. 104,049, Oct. 25, 1956. Not less than 30 parts by  
wt. of an oxidized mixt. contg. 70 parts petrolatum and 30  
parts paraffin is added per 100 parts rubber for manuf. of *Mark's*  
galoshes. M. Hosh ✓

USSR/Chemical Technology. Chemical Products and Their Application -- Crude rubber, natural and synthetic. Vulcanized rubber, I-21

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6032

Abstract: stability to ozone is retained if the film is converted to a fused state due to heat generation during use of the article. To achieve stability against the development of surface cracks during dynamic deformations, under ordinary temperature conditions, it is necessary to treat the surface layer with substances having an amorphous structure. In addition, these substances must be plasticizers for rubber and have a high viscosity which prevents their diffusion into the body of the vulcanizate. Good results are obtained by a treatment of the surface (by immersion into melts, at 140-150°) with aldol-alpha-aphthylamine, rosin, bitumen, rubrax and also with their various combinations.

Card 2/2



MAREY, A. I.

USSR/Chemical Technology. Chemical Products and Their Application -- Crude rubber, natural and synthetic. Vulcanized rubber, I-21

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6032

Author: Marey, A. I., Divova, M. P.

Institution: None

Title: Prevention of Cracking of Rubber Articles by Swelling of Their Surface in Certain Media

Original

Publication: Sb. Stareniye i utomleniye kauchukov i rezin i povysheniye ikh stoykosti. L., Goskhimizdat, 1955, 185-195

Abstract: There are considered various chemical and physical factors which enhance the resistance of vulcanizates to ozone cracking. A study was made of physical methods of preservation of vulcanizates, based on provision of a thin surface film of a substance that is inert in relation to ozone, of resin or wax type. Articles coated with the latter show good stability to ozone under static conditions, while integrity of the inert film is maintained. On dynamic deformations

Card 1/2

~~MAR 11, 1953~~ *Maroy, A. I.*

1854. Protection of rubber articles from cracking by surface swelling in certain media. *A. I. Maroy and M. P. Divova. 'Stroeno i Utomlenie', 1953, p. 194-95.* After swelling of vulcanised rubber, firstly in a thermally oxidised mixture of petrolatum and paraffin wax (which is claimed to be retained in a 0.1 mm surface layer of the rubber, and which gives good protection under static conditions but not under dynamic conditions), a second protective agent, colophony or its glycerol ester mixed with aldol- $\alpha$ -naphthylamine, is applied at 140 to 150°C for 5 min. The removal of surface stickiness due to the colophony is discussed. This treatment is claimed to give some protection against normal oxidative ageing.

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MAREY, A. I.

②<sup>2</sup>  
 Mechanical method for the determination of the vitrification temperature of rubberlike polymers. A. I. Marey. *Khim. i Fiz.-Khim. Vysokomolekul. Soedinenii, Doklady 7-oi Konf. Vysokomolekul. Soedineniyam* 1952, 274-9. — A mech. method for the observation of the vitrification temp. for rubberlike polymers is described. It is based on the measurement of the deformation of a polymer on compression under a const. pressure. The vitrification temp. found in this manner is for natural rubber  $-71^{\circ}$ ; kok-saghyz  $-60^{\circ}$ ; gutta-percha  $-71^{\circ}$  (supercooled from  $80^{\circ}$  to avoid crystn.); Buna-65  $-65^{\circ}$ ; Buna-32  $-52^{\circ}$ ; SK-B  $-54^{\circ}$ ; GR-S  $-64^{\circ}$ ; Buna SW-10  $-75^{\circ}$ ; Buna S-3  $-60^{\circ}$ ; Buna SS  $-30^{\circ}$ ; Perbunan 26  $-43^{\circ}$ ; Perbunan 35  $-32^{\circ}$ ; Hycor OR-25  $-30^{\circ}$ ; Hycor OR-15  $-23^{\circ}$ ; Neoprene-M  $-44^{\circ}$ ; Butyl rubber  $-60^{\circ}$ ; Oppanol  $-70^{\circ}$ ; Vistanex  $-70^{\circ}$ . This agrees with data obtained by other methods. H. D. Noggle

MAREVSKAYA, A.P.

Physiological characteristics of the musculus levator palperbrae.  
Fiziol. zhur. 51 no.6:741-748 Je '65. (MIRA 18:6)

1. Kafedra normal'noy fiziologii Pediatricheskogo meditsinskogo  
instituta, Leningrad.

KVASOV, D.G.; MANTYKIN, A.A.

Stationary electrocardiogram of the gastroparesis on its  
development in patients with chronic gastritis. Zh. vopr. med. biol. 1963.  
163. (Mosc. 17:11)

1. From the Department of Physiology, Leningrad State University,  
Leningrad.

MAREVSKAYA, A.P.

Participation of nasal muscles in the activity of the olfactory analyzer. Fiziol. zhur. 47 no.6:697-703 Je '61. (MIRA 15:1)

1. From the Department of Physiology, Paediatric Medical Institute, Leningrad.

(SMELL)

(NOSE)

MAREVSKAYA, A.P.

Participation of nasal muscles in the activity of the olfactory  
analyzer. Fiziol. zhur. 47 no.6:697-703 Je '61. (MIRA 15:1)

1. From the Department of Physiology, Paediatric Medical Institute,  
Leningrad.

(SMELL)

(NOSE)

KVASOV, D.G.; MAREVSKAYA, A.P.

Stationary electrical potential of nasal and oral mucosae  
and its ontogenetic development. Fiziol.zhur. 45 no.8:  
959-968 Ag '59. (MIRA 12:11)

1. From the Department of Physiology, Paediatric Medical  
Institute, Leningrad.

(NOSE, physiology)

(MOUTH, physiology)



MAREVSKAYA, A.P.

Effect of afferent impulses from the masticatory muscles on the  
activity of the salivation center. Fiziol. zhur. 44 no.3:212-218  
Mr '58. (MIRA 11:4)

1. Kafedra normal'noy fiziologii Peditricheskogo meditsinskogo  
instituta, Leningrad.

(MUSCLES, MASTICATORY, physiology

afferent impulses, eff. on activity of salivation center (Rus)

(SALIVATION, physiology

salivation center, eff. of afferent impulses from  
masticatory musc. (Rus)

MAREVSKAYA, A.P., Cand Med Sci -- (diss) "Data for  
the physiology of the masticating muscles." Len ,  
1958, 16 pp (Len Pediatric Med Inst) (KL, 28-58, 110)

- 89 -

**MAREVSKAYA, A.P.**

Proprioceptive reflexes of the masseter muscles in ontogenesis  
[with summary in English]. Biul. eksp. biol. i med. 44 no.12:16-  
20 D '57. (MIRA 11:4)

1. Iz kafedry normal'noy fiziologii (zav. - prof. D.G.Kvasov )  
Leningradskogo pediatricheskogo meditsinskogo instituta (dir. -  
prof. N.T.Shutova). Predstavlena deystvitel'nyy chlenom AMN SSSR  
M.S.Kaslovym.

(MUSCLES, MASTICATORY, physiology.  
proprioceptive reflexes, develop. in cats (Rus))

USSR / Human and Animal Physiology (Normal and Pathological).  
Nervous System.

T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60696

also a crossed reflex of stretching, indicated the capacity for radiation of the proprioceptive impulses. Super-strong stimulation (800 h. for cats and 500 h. for rabbits) produced a biphasic reaction, in which exaltation was changed to the decrease in amplitude and frequency of the electrical fluctuations, which is regarded as a pessimal inhibition of the centers. -- T. G. Beteleva

Card 2/2

USSR / Human and Animal Physiology (Normal and Pathological).  
Nervous System.

T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60696

Author : Marevskaya, A. P.

Inst : Not given

Title : The Stretch Reflexes of the Mastication Muscles in  
Adult Animals

Orig Pub : Fiziol. zh. SSSR, 1957, 43, No 9, 887-893

Abstract : In intact and decorticated cats and rabbits, under ether  
anesthesia, the stretching of the mastication muscles led  
to the increase in the fluctuation amplitude on EMG.  
The emergence of electrical activity in the chewing muscles  
and strengthening of breathing in a moderate stretching  
of one partly separated from the jaw chewing muscle,  
mutually reinforcing the activity of the simultaneously  
occurring particular reflexes of different muscles, and

Card 1/2

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MAREVICH, N.V.; ROMANOV, A.V.

Preliminary results of observing rock pressure on supports made of monolithic reinforced concrete in the shield system of mining with filling. Vop. gor. davl. no.7:19-26 '61. (MIRA 18:7)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR.

MAREVICH, N.V.

Question of using the shield system of mining with filling.  
Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:339-356 '60.  
(MIRA 144 )

(Coal mines and mining)

(Mine filling)

(Mine timbering)

MARKOVICH, N.V.

Spontaneous ignition of Tom'-Uss deposit coal in the Kuznetsk  
Basin. Trudy Inst.gor.dela Sib,otd.Ak SSSR no.2:141-166  
'59. (MIRA 13:5)  
(Kuznetsk Basin--Coal mines and mining--Fires and fire prevention)  
(Combustion, Spontaneous) (Tom' Valley--Coal--Testing)



MAREVICH, N.V.

Methods of erecting concrete pillars in mines. Trudy.Inst.gor.  
dela Sib.otd. AN SSSR no.2:21-36 '59. (MIRA 13:5)  
(Mining engineering) (Concrete construction)

MAREVICH, N.V., kand.tekhn.nauk

N.A. Chinakal, corresponding member of the Academy of Sciences of the  
U.S.S.R.; on his 70th birthday. Ugol' 33 no.11:44 N '58.

(MIRA 11:11)

(Chinakal, Nikolai Andreevich, 1888- )

MAREVICH, N. V. and DZYUBENKO, V. T. (Mining Inst. of the Siberian Branch of AS USSR)

"Experience in the use of Shield Conveying Systems."

report presented at a Sci.-Tech. Conf. on Improving the Exploitation System  
in coal Beds, called by Mining Inst, AS USSR, at Prokop'yevsk 20-22 Jan 1958.  
(Vest. Ak Nauk SSSR, '58, No.4, 105-7, author Lyakhov, G. M.)

-MAHEVICH, N.V.

Spontaneous ignition of coals in the Alykayev and Mazurova formations in the Balakhenka series of Kuznetsk Basin. Trudy Inst. gor.dela.Sib.otd.AN SSSR no.1:63-75 '58. (MIRA 12:11)  
(Kuznetsk Basin--Combustion, Spontaneous)

MAREVICH, N.V.

Preparation and use of materials from burning waste piles in  
the Kuznetsk Basin. Trudy Inst.gor.dela.Sib.otd.AN SSSR no.1:  
49-53 '58. (MIRA 12:11)  
(Kuznetsk Basin--Waste products)

MAREVICH, N.V., kand. tekhn. nauk, starshiy nauchnyy sotrudnik

N.A.Chinakal, corresponding member of the Academy of Sciences  
of the U.S.S.R.; on his 70th birthday. Trudy Inst.gor.dela.Sib.  
otd.AN SSSR no.1:7-10 '58. (MIRA 12:11)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR.  
(Chinakal, Nikolai Andreevich, 1938-)

WAREVICH, N.Y.

Relationship between the duration of the effect of atmospheric oxygen  
on spontaneous combustibility of Prokop'yevsk coals in the Kuznetsk  
Basin. Trudy Gor.-geol. inst. Zap.-Sib. fil. AN SSSR no.18:81-89 '56.  
(MIRA 13:11)

(Kuznetsk Basin--Coal)

(Combustion, Spontaneous)

MAREVICH, Nadezhda Viktorovna; SOBOLEV, G.G., redaktor; GRISHAYENKO, M.I.,  
redaktor; IL'INSKAYA, G.M., tekhnicheskii redaktor

[Spontaneous combustion of thick coal seams in the Prokop'ev  
deposit, Kuznetsk Basin] Samovozgoranie uгля meshchnykh plastov  
prokop'evskogo mestorozhdeniia kuzbassa. Moskva, Ugletekhnizdat,  
1955. 135 p. (MLRA 9:2)  
(Kuznetsk Basin--Coal mines and mining) (Combustion, Spontaneous)



MAREVICH, N. V.

Fuel Abstracts  
Vol. XV, No. 2  
February, 1954  
Natural Solid  
Fuels: Winning

1028. TENDENCY TO SPONTANEOUS IGNITION OF PETROGRAPHIC  
TYPES OF COAL IN PROKOP'EVSK DEPOSIT IN KUZBASS. Marevich, N.V.  
and Travin, A.B. (Izv. Akad. Nauk SSSR, Otdel. Tekhn. Nauk (Bull.  
Acad. Sci. U.S.S.R., Sect. Tech. Sci.), August, 1953, 1110-1117).

The first stage of investigations showed that different types  
of coal from the same place had different tendencies to oxid-  
ation and sorption and hence to spontaneous ignition. Both  
tendencies were less with dull and semi-dull durains and greater  
with tectonically compressed vitrain-fusains and vitreous.  
Oxidation of bright coals was more rapid at first, then slowed  
down; that of dull coals was generally less intense.

MAREVICH, N. V.

29043 Analiz samovozgora iya uglya pri shchitovoy sisteme razkabotki. Trudy gorno-geol  
IN-TA (Akad. nauk SSSR, Zap. -- Sib. filial), vyp. 4, 1949, s. 19-37 --  
Bibliogr: 10 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

MAREVICH, A.M. (Moscow); FILIPPOVA, L.F. (Moscow)

Formation of hydrogen peroxide in the oxidation of formaldehyde.  
Zhur. fiz. khim. 31 no.12:2649-2655 D '57. (MIRA 11:4)

1. Akademiya nauk SSSR, Institut khimicheskoy fiziki, Moskva.  
(Formaldehyde) (Oxidation) (Hydrogen peroxide)

ACC NR: AP7000703

separating rhenium from molybdenum in a sulfuric acid medium, to the choice of a proper tributyl-phosphate solvent and to the explanation of the reaction of hydrochloric acid and of chlorides upon the extraction. It was established experimentally that if extraction is repeated twice in a medium with 2 N sulfuric acid and 0.5 N chlorine ion concentrations, an almost complete separation of rhenium from molybdenum occurs. Cyclohexane was found to be the best solvent. A six-minute treatment of the extract with 40 ml of water and 30 ml of chloroform for re-extraction of rhenium proved most effective. The 0.5 N chlorine ion solution was acidified with sulfuric acid within 2 N limits and extracted twice during a three-minute period in 10 ml each of tributyl phosphate and cyclohexane. After washing out the extracting agent, rhenium can be reextracted from the organic phase in six minutes by using 40 ml of water and 30 ml of chloroform. The paper was presented by the corresponding member of the Academie, N. Pentshev, on 20 June 1966. Orig. art. has: 2 figures and 1 table. [DR]

SUB CODE: 07/SUBM DATE: none/SOV REF: 003/OTH REF: 007/

Card 2/2

ACC NR: AP7000703

SOURCE CODE: BU/0011/66/019/010/0913/0916

AUTHOR: Jordanov, N. ; Mareva, St.

ORG: Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences (Institut für allgemeine und anorganische Chemie, Bulgarische Akademie der Wissenschaften)

TITLE: Separation of rhenium from molybdenum by extraction with tributyl phosphate

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 19, no. 10, 1966, 913-916

TOPIC TAGS: rhenium, molybdenum, cyclohexane, tributyl phosphate, rhenium separation from molybdenum

ABSTRACT: Research has been done on the development of a method for extracting rhenium from molybdenum; this method could be combined with the distillation method described in 1963 by N. Jordanov and M. Pavlova (N. Jordanov, M. Pavlova. Mikrochim. acta. 3, 1963, 477). Tributyl phosphate proved especially suitable as the extracting agent. Special attention was paid to the problem of

Card 1/2

MAREVA, St.; KHRISTOVA, R.

Determining the silicon dioxide in iron ore containing barium sulfate. Doklady BAN 14 no.7: '61.

1. Predstavleno chl. korr. N. Penchevym.

(Iron ores) (Silicon) (Barium)

MOKHOV, L.A.; MAREVA, N.S.

Rapid method of determining the concentration of hydrogen peroxide  
vapors. Zhur.prih.khim. 35 no.11:2573-2574 N '62. (MIRA 15:12)  
(Hydrogen peroxide) (Air—Analysis)

MAREWIC, D.

What kind of economic organization would meet the needs of our fishermen?

P. 31 (NORWEGIAN FISHERIES) (Oslo, Yugoslavia) Vol. 10, no. 2, Feb. 1958

50: Monthly Index of East European Accessions (EMEA) LC Vol. 7, No. 5, 1958



MARETSKIY, Sergey Konstantinovich; POLYAKOV, B.F., red.; BELOUSOVA,  
L.I., tekhn.red.

[Tiraspol'; historical-geographic study] Tiraspol'; istoriko-  
geograficheskii ocherk. Kishinev, Gos.uchebno-pedagog.izd-vo  
Moldavskoi SSR, "Shkola Sovetika," 1958. 102 p. (MIRA 13:2)  
(Tiraspol'--Economic conditions) (Tiraspol'--History)

МАРЕТСКИЙ, С. К.

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,  
p 166 (USSR) 14-57-6-12992

AUTHOR: Maretskiy, S. K.

TITLE: Settlement of the City of Tirasopol' and its Environs  
at the End of the 18th and First Half of the 19th  
Centuries (K voprosu o zaselenii g. Tiraspolya i yego  
okrestnostey v kontse XVIII i pervoy polovine XIX vv.)

PERIODICAL: Uch. zap. Tirasopol'sk. ped. in-ta, 1956, Nr 1, pp 33-  
39

ABSTRACT: Bibliographic entry  
Card 1/1

MAKITSKIY, S., inzhener

Aircraft engine instruments. Kryl.rod. 3 no.8:15-19 Ag '52. (MIRA 8:8)  
(Aeronautical instruments)

MARETSKIY, Anatoliy Viktorovich; NAUMOVA, I.A., red.

[Mechanization of hay and straw harvesting; from the practices of collective and state farms in Archangel and Vologda 'rovinces] Mekhanizatsiya uborki sena i solomy; iz opyta kolkhhozov i sovkhozov Arkhangel'skoi i Vologodskoi oblastei. Arkhangel'sk, Severo-Zapadnoe knizhnoe izd-vo, 1965. 70 p. (MIRA 18:10)

MARETSKAYA, YE.

Machine-Shop Practice

Pouring babbit metal in making connecting rod bushings by the liquid stamping method., MTS, 12, no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.  
2

MARETSKAYA, M.F., dots. (Moskva)

Features of the course of benign lymphoreticulosis (cat  
scratch disease). Klin.med. 36 no.12:104-109 D '58.  
(MIRA 12:6)

(CAT SCRATCH DISEASE, manifest.  
(Rus))

MARETSKAYA, M.F.

Congenital hemolytic anemia with granulopenia. *Pediatrics* 36 no.11:  
74 N '58. (MIRA 12:8)

1. Iz Ketskoy ob'yedinennoy bol'nitsy No.18 Sovetskogo Rayona Moskvy.  
(ANEMIA)

MARETSKAYA, M. F. dotsent.

Infectious disease caused by cat bite or scratch. Sov. med. 19 no.11:  
45-48 N '55. (MIRA 9:1)

1. Iz gorodskoydetskoy infektsionnoy bol'nitsy No 8 Moskvy  
(glavnyyvrach P. F. Krasnova, konsul'tant - dotsent M. F. Maretskaya)  
(CAT SCRATCH DISEASE,  
case reports)



MARETSKAYA, M.F., dotsent

Metabolic bone disease and rickets; etiology and pathogenesis of  
metabolic bone disease. *Pediatriia* no.3:57-65 My-Je '54.

(MLRA 8:1)

1. Iz kafedry detskikh bolezney (direktor - chlen-korrespondent  
Akademii meditsinskikh nauk SSSR professor Yu.F.Dombrovskaya)  
I Moskovskogo ordena Lenina meditsinskogo instituta.

(RICKETS)

(BONES--DISEASES)

MARETSKAYA, M.F.; BAYADINA, S.A.; GARELIK, O.S.; GEYSHINA, R.V.; BONDARENKO, T.V.;  
SHISHOVA, Ye.M.

Pneumonia in infants. Sovet. med. 17 no.7:30-32 July 1953. (CIAM 25:1)

1. Of the Clinic for Children's Diseases (Director -- Prof. Yu. F. Dombrovskaya, Corresponding Member AMS USSR) of First Moscow Order of Lenin Medical Institute, Frunzenskiy Rayon Children's Hospital (Head Physician -- F. I. Fefer), and the Children's Division (Head -- R. V. Geyshina) of Polyclinic No. 56.

MARETSKAYA, M.F.; ISAYEVA, L.A.

Fibrous dysplasia. *Pediatrics*, Moskva No.6:51-56 Nov-Dec 51. (CIAL 21:4)

1. Docent Maretskaya. 2. Of the Clinic for Children's Diseases (Director Honored Worker in Science Prof. V.I. Molchanov, Active Member of the Academy of Medical Sciences USSR), First Moscow Order of Lenin Medical Institute.

MARETSKAYA, M.F.; ZVONITSEKAYA, T.M.

Hypertonia in scarlet fever in children. Sovet.med. no.3:9-10  
Mr '50. (GIML 19:2)

1. Of the Department of Children's Diseases, First Moscow Order  
of Lenin Medical Institute (Director of Department -- Prof.  
V.I.Molchanov).

MARITSKAYA, M. F.

Maritskaya, M. F. and Kurbatova, M. D. "Osteopathy for children," Trudy VI  
Vsesoyuz. s'yezda det. vrachev, posvyashch. pamyati. prof. Filatova, Moscow,  
1948, p. 232-35

SO: U-3244, 10 April 1953, (Letopis 'Zhurnal 'nykh Statev, No. 3, 1948)

MARETINA, S. A.

"Obshchina u malykh narodov Assama."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences,  
Moscow, 3-10 Aug 64.

L 26052-66

ACC NR: AP5025123

with  $\pi$ -electrons of multiple bonds. By the action of trialkylchlorosilanes on the Iotsich complexes/obtained from the single amines of  $\text{HC}\equiv\text{C}-\text{CH}=\text{CH}-\text{NR}_2$ , two silicon containing acetylene enamines of  $\text{R}_3\text{Si}-\text{C}\equiv\text{C}-\text{CH}=\text{CH}-\text{NR}_2$  type were synthesized, where  $\text{R}=\text{CH}_3$  and  $\text{C}_2\text{H}_5$ . The dipole moments of the silicon-containing acetylene amines are greater than those of the original 1, 3-single amines by 0.4-0.8D. This fact is interpreted as the result of a d-orbit participation of the silicon atom in the conjugation. Orig. art. has: 2 fig. 2

SUB CODE: 07,20/ SUBM DATE: 09Oct64/ ORIG REF: 006

Card 2/2 *pla*

L 26052-66 EWT(m)/EWP(j) IJP(c) JW/RM

ACC NR: AP5025123

SOURCE CODE: UR/0079/65/035/010/1720/1723 8/

AUTHOR: Petrov, A. A.; Maretina, I. A.; Mingaleva, K. S. 79

ORG: Leningrad Technological Institute imeni Lensovet (Leningradskiy tekhnologicheskii institut) B

TITLE: Silicon-containing acetylene enamines 1

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1720-1723

TOPIC TAGS: silicon compound, silane, electron density, magnetic resonance, secondary amine, dipole moment, hydrogen bonding, organic synthetic process, acetylene  
 ABSTRACT: A study of the physical properties of 1, 3 amines of the  $R_2N-CH=CH-C \equiv CH$  type made it possible to hypothesize the strong displacement of the electron cloud in their molecules to the side of the triple bond. These compounds have a considerably higher dipole moment than the saturated amines; the nitrogen atom does not seem inclined to hydrogen bond formation; and the magnetic resonance signal of the acetylene proton indicates strong shielding. The purpose of the work was to determine how the electron density distribution is changed in a system during introduction into the chain of a silicon atom capable of d,  $\pi$ -reaction

Card 1/2

UDC: 547.333.3:547.345 2



PETROV, A.A.; MARETINA, I.A.; MINGALEVA, K.S.

Silicon-containing acetylenic enamines. Zhur. ob. khim. 35  
no.10:1720-1723 O '65. (MIRA 18:10)

L. Leningradskiy tekhnologicheskii institut imeni Leningrada.

ACCESSION NR: AP4037061

S/0079/64/034/005/1685/1685

AUTHOR: Maretina, I. A.; Petrov, A. A.

TITLE: Dialkyl(vinylacetylenyl)phosphines

SOURCE: Zhurnal obshchey khimii, v. 34, no. 5, 1964, 1685

TOPIC TAGS: dialkyl(vinylacetylenyl)phosphine, dibutyl(3-buten-1-ynyl)phosphine

ABSTRACT: Previously unknown enyne-substituted phosphines have been prepared at the Leningrad Technological Institute imeni Lensovet. The new phosphines are readily obtained by treating an enynylmagnesium bromide with a dialkylbromophosphine in ethyl ether under nitrogen. Dibutyl(3-buten-1-ynyl)phosphine thus prepared had the following constants:  $b_D$ , 92C;  $d_{20}$ , 0.8602;  $n_D^{20}$ , 1.5110. The presence in this phosphine of the conjugated vinyl ethynyl group was confirmed by IR spectroscopy.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensoveta (Leningrad Technological Institute)

Card 1/2

MARETINA, I. A.; PETROV, A. A.

Synthesis and properties of crystalline dodecane-2,2,7,7-  
tetramethyloctane. Zhur. ob. khim. 32 no.12:3898 D '62.  
(MIRA 16:1)

1. Leningradskiy tekhnologicheskij institut imeni Lensoвета.

(Octane) (Dodecane)

PETROV, A.A.; LEBEDEV, V.B.; MARETINA, I.A.; YELSAKOV, N.V.

Nuclear magnetic resonance spectra of enynes and the --effect.  
Zhur.ob.khim. 32 no.5:1711-1712 My '62. (MIRA 15:5)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.  
(Hydrocarbons--Spectra)